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EXAMINER
HUYNH, CONG LAC T

ART UNIT	PAPER NUMBER
2178	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4* is/are allowed.

6)☒ Claim(s) *5-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
                                              Paper No(s)/Mail Date. _____.
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application
3)☒ Information Disclosure Statement(s) (PTO/SB/08)   6)☐ Other: _____.
   Paper No(s)/Mail Date *1/26/07*.

DETAILED ACTION

1.   This action is responsive to communications: RCE filed 1/15/07 to the application

filed on 12/15/03.

2.   Claim 21 is added.

3.   Claims 1-21 are pending in the case. Claims 1, 5, 13 and 21 are independent

claims.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

6.   Claim 5 recites the limitation "the user" in line 7. There is insufficient antecedent

basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

8.   Claims 5-12 remain rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter.

Claims 5-12, as amended, are directed to a computer readable medium having stored

thereon computer executable instructions for defining an XML schema that describing a

non-XML data stream. According to the specification of the instant application, the

computer readable medium includes both computer readable storage medium and the

transmission media ([0030]). A computer readable medium of transmission media,

which includes signal and carrier waves, has the 101 issue.

Therefore, to limit the claim only on the storage medium and to overcome the 101 issue,

it is suggested to replace the phrase "A computer-readable medium" with "A computer-

readable storage medium."

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuh

et al. (US Pat App Pub No 2004/0073870, 4/15/04, priority 10/15/02) in view of Belfiore

et al. (US 2002/0059425).

Regarding independent claim 13, Fuh discloses:

-       providing assemblies containing implementation to extend a functionality of a

        schema compiler ([0029], [0035]: providing the Annotated Automation Encoding

format with the addition of annotations, which is attributes for element nodes in

the XML schema tree shows assemblies with implementation to extend a

functionality of the XML schema compiler)

- referencing definitions of interfaces for exposing extended functionalities to said

    schema (figures 3, 5)

- adding custom properties to elements and attributes in the XML schema ([0029],

    [0036], figures 3, 5: adding additional annotations, which are attributes and data

    type constraints for the element nodes, to the XML schema tree shows additional

    properties added to elements of an XML schema)

Fuh does not explicitly disclose the schema editor. However, Fuh does teach the XML

schema compiler which receives XML schema definition as input and generates a

structured hierarchy for the XML schema definition and represents it in an annotated

tree ([0034]-[0036]).

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have modified Fuh to include a schema editor since the feature in Fuh

implies that the schema is added with annotations, and thus modified. This suggests

that the XML schema compiler further has a role of an editor.

Fuh also does not disclose that the custom properties defining characteristics of non-

XML data within XSD schemas.

Belfiore discloses receiving non-XML data and converting it into XML data ([0082].

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Belfiore into Fuh for the following reason. Belfiore

discloses the ability of converting non-XML data into XML data thus providing the

advantage to incorporate into the custom properties of XML elements in the XML

schema in Fuh for having the custom properties defining characteristics of non-XML

data within XSD schemas. The attribute/characteristics of XML data when converted

from non-XML data would include attributes/characteristics of non-XML data but in XML

format. Combining Belfiore into Fuh would provide a XML data necessary for a XML

schema where the source of the XML data is from a plurality of non-XML data

documents that need to be converted to XML for a specific purpose using the

effectiveness of XML language.

Regarding claim 14, which is dependent on claim 13, Fuh discloses that said extended

functionalities include additional properties added to elements and attributes of an XML

schema ([0029], figures 3, 5: additional attributes via annotations in the XML schema

tree shows additional properties added to elements of an XML schema).

Regarding claim 15, which is dependent on claim 14, Fuh discloses providing a property

manager that implements an interface to define custom properties for said elements and

attributes ([0035]: defining attributes of the element nodes where the attributes are

considered custom properties implies that there is a properties manager for performing

said function).

Regarding claim 16, which is dependent on claim 15, Fuh discloses storing said custom

properties within said XML schema (figure 3, #308).

Regarding claim 17, which is dependent on claim 15, Fuh discloses annotating said

XML schema to describe XML data streams (figure 3, [0040], [0041]).

Fuh does not disclose that the XML data streams are converted from non-XML data.

Belfiore shows that XML data can be converted from non-XML data ([0082]: receiving

non-XML data and converting it into XML data)..

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Belfiore into Fuh for the following reason. Belfiore

discloses converting non-XML data into XML data thus providing the advantage to

incorporate into the XML schema for XML data in the Fuh for annotating the XML

schema to describe non-XML data within XSD schemas since the XML data used by the

XML schema and its characteristics can be converted from a non-XML data.

Regarding claim 18, which is dependent on claim 15, Fuh discloses providing a

validator to validate said custom properties ([0047], [0048][0064], [0071], [0072]).

Regarding claim 19, which is dependent on claim 15, Fuh discloses providing an

instance generator for generating an instance of said XML schema (figure 5).

Regarding claim 20, which is dependent on claim 13, Fuh discloses annotating a

schema being edited by said schema editor to include information about said extended

functionalities ([0033]-[0035]: annotations for XML schema shows annotating a schema

which is edited to include attributes of sub-elements, which are considered information

about extended functionalities).

Regarding independent claim 5, Fuh discloses:

- an instance tree view (figure 5)

- a text view of said XML schema (figure 5)

- a properties view (figure 5: nodes in the tree with properties such as String,

  Integer)

- wherein to construct a schema, a user creates a simple hierarchical tree

  structure in the instance tree (figure 5)

- properties associated with XML data are entered via said properties view to

  define characteristics of data contained within XML data ([0029], [0036])

Fuh does not disclose that the properties associated with said non-XML data stream are

entered via said properties view to define characteristics of data contained within said

non-XML data stream.

Belfiore shows that XML data can be converted from non-XML data ([0082]: receiving

non-XML data and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Belfiore into Fuh for the following reason. Belfiore

discloses converting non-XML data into XML data thus providing the advantage to

incorporate into for the XML data of the XML schema in Fuh for entering properties

associated with the XML data to describe non-XML data within XSD schemas since the

XML data used by the XML schema and its characteristics when converted from a non-

XML data still include characteristics of non-XML data but in XML format.

Regarding claim 7, which is dependent on claim 5, Fuh discloses that said specific

properties comprises XSD properties ([0029]).

Regarding claim 8, which is dependent on claim 5, Fuh discloses that maintaining

extensibility mechanism wherein said properties for specific nodes associated with

differing types of XML data are specified ([0037]-[0038]).

Fuh does not disclose said maintaining for non-XML data.

Belfiore shows that XML data can be converted from non-XML data ([0082]: receiving

non-XML data and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Belfiore into Fuh for the following reason. Belfiore

discloses converting non-XML data into XML data thus providing the benefit to

incorporate into the XML data for the XML schema in Fuh for having a XML data

converted from a non-XML data to be maintained.

Regarding claim 9, which is dependent on claim 8, Fuh discloses maintaining a custom

view for adding properties to each node that appear in said properties view ([0036]-

[0038], figure 5).

Regarding claim 10, which is dependent on claim 5, Fuh discloses maintaining a

validation mechanism, and an instance generation mechanism ([0039], figures 7-8).

Regarding claim 11, which is dependent on claim 10, Fuh discloses that said schema is

validated from a XML perspective ([0039], [0048]-[0051]).

Fuh does not disclose that said schema is validated from a non-XML perspective.

Belfiore shows obtaining XML data from non-XML data ([0082]: receiving non-XML data

and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Belfiore into Fuh for the following reason. Belfiore

discloses obtaining XML data from non-XML data into XML data thus providing the

advantage to incorporate into the XML data for the XML schema in Fuh for validating a

XML schema from a non-XML perspective since XML data and its characteristics can

be converted from a received non-XML data. This suggests having a schema to be

validated from a non-XML perspective.

Regarding claim 12, which is dependent on claim 10, Fuh discloses a sample instance

data is generated from said XML schema containing data from said XML data ([0039]).

Fuh does not disclose a sample instance data is generated from said XML schema

containing data from a non- XML data stream.

Belfiore discloses obtaining XML data from non-XML data ([0082]: receiving non-XML

data and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Belfiore into Fuh for the following reason. Belfiore

discloses obtaining XML data from non-XML data thus providing the advantage to

incorporate into the XML data in the XML schema in Fuh for having instance data that is

generated from said XML schema containing data converted from a non-XML data

stream.

11.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuh in

view of Belfiore as applied in claim 5 above, and further in view of Allen et al. (US

6,151,568).

Regarding claim 8, which is dependent on claim 5, Fuh does not disclose a color-code

view of a portion of said XML-schema associated with a particular node.

Allen discloses assigning colors for each particular node in the tree (col 9, line 65 to col

10, line 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to have combined Allen into Fuh for easily recognizing a particular node in a

tree thanks to the associated colors assigned to the nodes.

Allowable Subject Matter

12.   Claims 1-4, 21 are allowed.

13.   The following is a statement of reasons for the indication of allowable subject

matter: including delimitation nodes within said XML schema that defines delimiting

characteristics of a non-XML data stream where the delimitation nodes are child nodes

in the XML schema, where instances of the content nodes in the XML instances are

intended to contain portions of the non-XML stream that are delineated by the delimiting

portions of the non-XML data stream, and generating the instances of the content nodes

containing the identified content portions of the non-XML data stream, where the

instances of content nodes contain respective content portions identified by delimitation

nodes of the corresponding content nodes in the XML schema, where the delimiting

portions matched to the delimitation nodes are not included in the XML instance, were

not disclosed in the prior art of record.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Lewis (US 2002/0111924).

Atkinson (US 2004/0098667).

Aridor et al. (US 2004/0215650).

Franke et al. (US 4,710,763).

Kane et al., Consistently Updating XML Documents Using Incremental Constraint

Check Queries, ACM 2002, pages 1-8.

Glushko et al., Document Engineering for e-Business, ACM 2002, pages 42-48.

15.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cong-Lac Huynh whose telephone number is 571-272-

4125. The examiner can normally be reached on Mon-Thurs (9:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cong-Lac Huynh
Primary Examiner
Art Unit 2178
3/20/07